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AUGUST'S THEME:

Project Development Team (Construction)

DWIGHT'S NOTES

This month marks a year since Carl and I moved back from the field to HQUSACE. For me the time went pretty fast (although some issues seemed to drag on forever). We've been part of a transformation of the headquarters during this short time that, to me, is remarkable. The reengineering of Military Programs is well underway. The biggest impact on E&C is gaining responsibility for design and construction policy for the Corps installation support (O&M) mission and transferring responsibility for medical facility technical leadership to the new MMCX, which will become part of Huntsville Center. Only part of this transformation is tangible, though. There is far more teaming, examples of sharing, and far less tension among the members of headquarters Program Delivery Team. Much of this transformation, though, sits restlessly in the minds and attitudes of a growing segment of the senior leaders and senior managers. In time, this pent up energy will find its way into some concrete changes in the roles, business processes and organization of the headquarters.

We all need to examine our roles in the Corps to ensure we are contributing as much as possible to the team effort to maximize customer satisfaction.

In the past few weeks I've visited construction sites at Ft. Bragg, N.C. and had some quality conversations with three district Chiefs of Construction about the role of our construction family on the Project Delivery Team. I'm satisfied that, for the most part, our construction people understand where they fit on today's PDT: the vital link between the customers' requirements and the completed physical work. We, in construction, are learning to communicate well with project managers, designers, DPW's, local sponsors, contracting officers, users, and, of course, construction contractors. But, what will be our role on tomorrow's PDT? Here is one scenario?

Regional Business Centers have the potential to change the focal point of program and project execution from a district to a division, and, hopefully, someday, to an USACE-wide perspective. When that happens, the Corps capabilities will be shared readily among many. Projects will be developed and designed virtually together with our customers. New technology will enable contract administration and some limited site inspection to be performed remotely. This will also lead to less face to face time allocated between the PDT and our customers and contractors. DPW staff will also continue to dwindle bringing more responsibility for the Army's facilities into the Corps realm. Within this scenario, I foresee us being more dependent, not less, on the quality of the relationships between our "on the ground" field forces and others.

DWIGHT'S NOTES (CONTINUED)

This calls for a new role for our area, resident, and project offices throughout the world. This role will expand beyond the construction phase of our project delivery system and well into important facets of project development, design management, and facilities management. We will need a new breed of field personnel, who collectively, can deal adroitly, person to person, with planners, designers, contractors, soldiers and families through all phases of the project life cycle. Their lessons learned will be shared real time with peers throughout the Corps using state-of-the-art technology. Their knowledge will be highly valued and sought after. The lines between Project Manager responsibilities and Area Engineer responsibilities will blur, then fade, and then disappear as we shift from individual work to teamwork.

I want our construction leaders to be prepared to share in the development and leadership of tomorrow's PDT. Here are some challenges for you. You may be asked to relocate your field offices to be closer to your customer. You may be asked to co-locate your field office with those of other functional peers or even neighboring districts in your vicinity. You could be asked to take on more responsibilities interfacing with our customers. You will staff your offices with talented, multi-functional people, who will serve you as well as others in districts across the Corps. You will concentrate less on contract administration to make room for these added responsibilities. First and foremost, you must move from manager to leader if you are to thrive. Are you ready?

(Editors' note: If you want to share your thoughts with our readers regarding the above send an email to the E&C Newsletter editors (charles.pearre@usace.army.mil or denise.massihi@usace.army.mil). We'll publish a synopsis of your comments next time).

CARL'S NOTES

It has been 18 months since the Project Management Business Process (PMBP) formalized with the issuance of ER 5-1-11, Program and Project Management. From my discussions with field folks and after reading the EIG report on "Teaming", I believe we are starting to turn the corner on implementing the PMBP. We still have much work to do on our "journey." Our broad "above the line" guidance and the local level "below the line" decision making by Commanders is key for the system to work successfully. Districts will organize to take advantage of their individual situations. At the Project Development Team (PDT) conference last month I emphasized six points for the E&C team members of the PDT:

- The PMBP must not only work but we must make it thrive!
- The Project manager is in charge
- Concentrate on understanding and meeting customer expectations
- Keep the functional Chief and team members informed of project changes in your area of responsibility
- You share responsibility with all other team members for the quality of the project.
- Involve yourself very early -- development of the PMP.

A summary of the PDT Conference is available at <http://www.mvp.usace.army.mil/PDT/PDT.htm>. In addition, the various presentations made at the conference can be accessed from that site.

CARL'S NOTES (CONTINUED)

We had an outstanding retirement luncheon for Phil Brown on 29 July (see article in July issue). I wish to thank all the field representatives who attended the luncheon or sent notes wishing Phil well during his retirement. Stepping into the administrative role as Deputy Chief, Engineering and Construction Division, Civil Works, is Don Dressler, who has been the Chief, Structures, Power, and Machinery Branch. Don has been in HQUSACE for over 20 years and has an in-depth knowledge of the workings of both HQUSACE and the field.

I have just returned from the 1999 Corps of Engineers Geotechnical and Materials Engineering Workshop that was held in Portland, Oregon. Over two hundred fifty people attended the workshop including Civil Works and Military Programs representatives plus individuals from the U.S. Bureau of Reclamation, the U.S. Department of Agriculture, and private consulting firms. Three internationally renowned engineers addressed the conference. Dr. David Bowels, Utah State University, gave the keynote address on "Risk Assessment in Dam Safety Evaluation and Management." Dr. J. M. Duncan, Virginia Polytechnic Institute and State University gave talk on "Factors of Safety and Reliability in Geotechnical Engineering." Dr. Koerner, Drexel University, conducted a workshop on geosynthetics. In addition, 100 technical presentations involving investigation, design, construction, and maintenance of Flood Control, Navigation, Coastal, Pavement, and HTRW projects were made during the 2 1/2-day span of the event. Two workshops one on rehabilitation and maintenance of relief wells and other on use of geosynthetics in geotechnical engineering, and a field trip to Bonneville Lock & Dam were conducted on 5 August. All individuals that spoke with indicated that the discussion of new technologies and the exchange of experiences in geotechnical engineering made the event a great success that was well worth the time and resources to attend. I've challenged all attendees to share their conference experiences with their district leaders and peers as well.

During the beginning of August I've visited Portland, Rock Island, Saint Paul and the New Orleans Districts. I met with District leaders, careerists and visited a few projects in between selection panels. This has given me a good opportunity to listen and dialog with many of you and at the same time get an appreciation for your programs and issues. I would like to thank all of you that made those experiences worth while and for your candid comments.

August and September are doubly busy months. It is the height of the construction season. The fiscal year is ending with the requirement to complete plans and specifications for work that must be awarded before the end of the fiscal year. At the same time, the House and Senate reports on our appropriations bill give us an estimate of the workload for the coming new year, which starts our planning and scheduling activities anew. When rushing to complete one year and start the next year, be sure and remember our most important resource, our people. Include time in the work plans for training and development of the workforce for the future.

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Project Development Team (Construction)

CONSTRUCTION'S ROLE ON THE PROJECT DELIVERY TEAM

The 1999 Project Delivery Team (PDT) conference was held in St. Paul, Minnesota, 12-16 July 1999. The St. Paul District hosted the conference. The focus of the conference was on construction and operations. Over 280 Corps team members participated in the conference. The three and a half-day conference featured sixteen general sessions and several breakout sessions each afternoon. In a presentation to the general session Mr. Carl Enson, Chief, Engineering and Construction Division, Civil Works Directorate at HQUSACE laid the groundwork for discussions on construction and the PDT in his presentation on the role construction team members should play on the PDT. Carl directed

us to the project management regulation (ER 5-1-11) for guidance on the roles and responsibilities of PDT members. The regulation provides broad “above the line” guidance and allows for “below the line” decision making by Commanders within the Project Management Business Process (PMBP). Carl addressed the foundation of the PMBP the concept that projects are managed by a multidisciplinary project team lead by a project manager. The PDT includes the customer, the project manager and representatives from technical/functional elements necessary to execute the project. As the representative of the construction function the construction team member must become actively involved in the early phases of the project life cycle and remain involved until the project is delivered to the customer. The construction team member should participate in all activities of the PDT. However, they should take special interest in activities involving acquisition planning, quality, safety, budget preparation and management, schedule preparation and management and the establishment of product delivery dates to the customer. Construction's role on the PDT was also addressed at breakout sessions facilitated by Karen Durham-Aguilera, Bill Sorrentino, Phil O'Dell and at a discussions session moderated by Dwight Beranek and Carl Enson. For more detail on the presentations made at the conference go to the St. Paul home page where they can be viewed online or downloaded.

Next year's conference will be in Seattle and will be hosted by the Northwestern Division and the Seattle District. The focus will be on the planning and design process of project delivery.

POC: ALLEN HURLOCKER, CECW-EC, 202-761-8831

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PITTSBURGH DISTRICT PDT DELIVERS

On July 1, 1999, the Braddock Dam Project Delivery Team (PDT) for the Locks and Dams 2, 3 and 4, Monongahela River Navigation Project (Lower Mon) awarded a contract for the Corps first “In-The-Wet” construction of a navigation project. Because this will be the first such use of this technology by the Corps, the design and acquisition processes employed by the Pittsburgh District were structured to meet the challenges these innovations presented. The Pittsburgh District supplemented its own experienced design team with expert Corps of Engineers personnel from around the country and Architect-Engineering firms with a wealth of knowledge and success using in-the-wet construction techniques in major civil works projects around the world.

There were several key features of the Braddock Dam PDT formation and performance that were critical to the success of the project:

- Comprehensive evaluation of acquisition strategies to maximize the flexibility and efficiency of the construction contractor community lead to a District decision not to provide a mandated government-furnished fabrication site for the float-in concrete segments, since an array of options were possible. The contractors were allowed to determine the fabrication and methods guided by the solicitation. Of the six fabrication proposals received, four were land-based and two were barge-based.
- The acquisition strategy focused on the Best Value-Trade Off RFP procurement method, which allowed the District to evaluate and compare the price and non-price factors of proposals. Of all the non-price factors, the technical strengths and weaknesses and associated risk factors were most important. Special contract training in best-value procurement was provided to an extended design, management, and selection team, assuring that the solicitation and selection process was efficiently and effectively performed. The Best Value Trade-Off method allowed for the award to be made to other than the lowest priced offered, based on an evaluation of the proposals against the evaluation criteria.

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- Specialized Experts were brought in for specific project purposes and became valuable assets to the team, allowing continued progress on an ambitious schedule. The additional cost for securing the services of these individuals was warranted.
 - Draft RFP packages and the video distribution to the contracting community provided valuable feedback that improved the design and contract quality. It also effectively prepared the potential contractors for the size, complexity, and significance of the work, which helped insure a successful solicitation.
 - Feedback from field personnel at the Locks through the Operations Division design team representative was valuable, and prevented numerous design changes following each review.
 - Use of the Construction Division Resident Engineer continuously during design and contract development was very beneficial to the completion of an effective contract package. Further, as a member of the selection board, the Resident Engineer brought experienced and highly motivated judgement to the consensus building requirements of conducting the Best Value-Trade Off evaluations.

The team is what made the difference and created a success. This team was large and diverse, but the members worked together to flexibly and effectively solve overwhelming technical, logistics, financial, and time issues and produce a high quality product for the Corps and the river navigation system in the United States. This team has shown what is required for the Corps of Engineers to successfully produce quality construction projects as we move into the 21st century.

If you have any questions, or desire additional information, please contact the Pittsburgh District Project Manager for the Locks and Dams 2, 3 and 4 Project.

POC: HANK EDWARD, CELRP-PM-M, 412-395-7374

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Safety Saves!

Safety Saves was the title and theme of the presentation made by Ms. Connie DeWitte at the Project Delivery Team (PDT) Conference in St. Paul, Minn. last month. She explained how the integration of Safety and Occupational Health into the initial planning phases of the PDT business process could reduce the number of costly retrofits, unscheduled delays, change orders, funding problems, unsafe conditions and dissatisfied customers. Ms. DeWitte also talked about how fire/life safety code, lead-based paint, asbestos, electrical and other OSHA violations could be avoided through the involvement of safety and health professionals (safety engineers, industrial hygienists health physicists, safety managers, etc.).

Ms. DeWitte envisions the Safety and Occupational Health as playing a significant support role in the PPMD Process. She sees the Project Manager as key to the effective integration of safety and health into the PPM Business Process. As team leader, the PM has the primary responsibility for assuring that safety and health criteria for the project is being adequately addressed by all team members. He/she should oversee and coordinate the technical safety and health input provided by each member. Team members should be aware of their individual safety and health responsibilities and be able to provide the technical safety and health input for their functional areas.

As well as having industrial hygienists on staff, Ms. DeWitte believes that DET's should have engineers trained in electrical, fire/life safety and OSHA criteria and they should serve as technical safety consultants to the team. They should also perform the technical safety and health design reviews. The Safety and Occupational Health Office should provide generalized support and oversight to that process as well as manage the District/Division Safety and Occupational Health Program.

Ms. DeWitte says she looks forward to the challenge of fully integrating safety and occupational health into the PPMBP.

POC: SAM TESTERMAN, CESO-E, 202-761-8668

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International Activities

CHINA INTERNATIONAL SYMPOSIUM ON ROLLER COMPACTED CONCRETE DAMS

Two engineers from the U.S. Army Corps of Engineers, Steve Tatro (Walla Walla District) and John Hess (Sacramento District) presented technical papers and participated in the China International Symposium on Roller Compacted Concrete Dams, held in Chengdu, China, on 20 April - 1 May 1999. The Symposium and Dam Study Tours were organized by the Chinese Society for Hydroelectric Engineering and co-sponsored by ICOLD and several Chinese organizations. The Symposium and Dam Study Tours produced an extraordinary amount of useful information on RCC technology, including several new technology issues, and provided excellent opportunities to meet and exchange valuable information and points of view with the leading planners, designers, contractors, and owners in the concrete dam industry worldwide. Over 150 participants from 17 countries attended the Symposium, including many luminaries in the RCC industry.

Proceedings of the Symposium in two volumes were organized into six themes, including General, Materials, Design, Equipment, Construction, and Operation. 99 papers on RCC are included in the Proceedings. Approximately 50 of these papers were selected for presentation at the Symposium. Mr. Tatro and Mr. Hess were invited by the Symposium Organizers to present their papers entitled, respectively, "Commentary on the Corps of Engineers Approach to Thermal Analysis," and "RCC Lift Joint Strength - Corps of Engineers Practice." Special presentations on RCC progress in a number of specific countries were also featured. These valuable Proceedings should be available in the WES Library soon.



Three Gorges Dam

The Corps presentations were very well received in the Symposium. Mr. Hess discussed several aspects of current Corps' practice on RCC lift joint design, based partly on the recently revised EM 1110-2-2006, "Roller Compacted Concrete" (Mr. Hess and Mr. Tatro both authored several chapters). In addition he proposed a new procedure for analyzing concrete lift joint strength data, which attracted interest and comment. Mr. Tatro

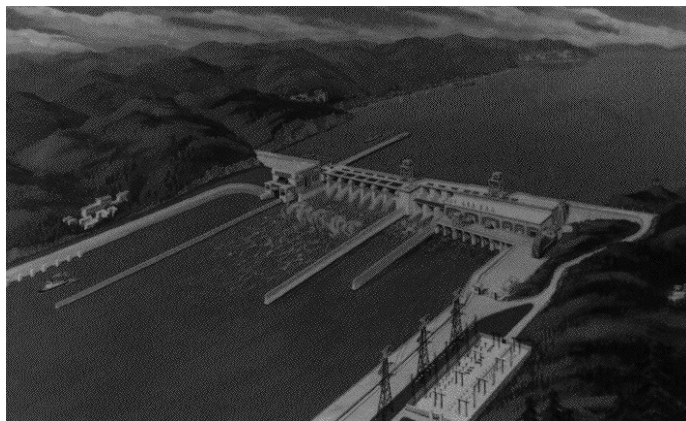
presented excellent discussion on current Corps practice concerning thermal analysis of RCC structures, based partly on the ETL 1110-2-542 they prepared on "Thermal Studies of Mass Concrete Structures."

The hospitality of the Chinese organizers and people was excellent. The Symposium was held in a large convention community near Chengdu in Sichuan Province. Yes, that is the home of Sichuan cuisine - very spicy. We were treated very well throughout the events of the Symposium, including two evening performances of Chinese ethnic dance, music and song.



Shapai Arch Dam

Dam Study Tour. - Several RCC and conventional concrete dams, including Shapai Arch Dam (under construction), Gezhouba Dam and Powerplant, Three Gorges Dam (under construction), and Gaobazhou Dam (under construction), were visited. Each visit generally consisted of a briefing, sometimes a visit to an elaborate model of the project, and a visit to the dam site. These visits were extremely useful, due to the opportunity to discuss not only the project at hand, but to view two new RCC technologies: grout-enriched RCC and the newly developed sloping layer placement method. Shapai Dam illustrated arch dam construction using RCC (the Chinese are the only ones to have applied RCC technology to concrete arch dams). Chinese RCC dams generally are constructed with relatively high cementitious material content mixes, but vary greatly from site to site in overall dam design. The Chinese seem to prefer building with concrete, in preference to embankment dams, mostly



Geobazou Dam

due to the commonly steep, sound rock foundations available. The Chinese also prefer using RCC for cofferdams, due to the small foundation footprint required, the rapid construction, and the resistance to overtopping erosion.

Technology Transfer - The amount of technical information and technology interchange from this Symposium was excellent, and information gathered on the grout-enriched RCC and the sloping layer placement method has been passed on to USACE-WES personnel for possible future research activities. During the

Symposium, the Dam Study Tour, and following the official events, a wide variety of ongoing discussions were held between a number of participants on RCC topics. These discussions were as productive as the Symposium itself. Mr. Tatro and Mr. Hess were presented with copies of the French RCC Practice book (from Francois Delorme), and a copy of Francisco Andriolo's (Brazil) new book on RCC. Participation in this Symposium was a good investment for the Corps at large. The United States and the Corps of Engineers gained additional credibility and prestige from active and positive participation in this international forum.

The PowerPoint technical presentations can be viewed at <http://damsafety.water.ca.gov/chinahess.ppt> at <http://damsafety.water.ca.gov/chinatatro.ppt>. The technical papers can be viewed at <http://damsafety.water.ca.gov/chinahess.doc> and <http://damsafety.water.ca.gov/chinatatro.doc>. A

PowerPoint presentation of the China trip, including photographs of the RCC dams and Three Gorges Dam constructions, can be viewed at <http://damsafety.water.ca.gov/chinatripb.ppt>. These are best viewed using the “slide show, view show” format.

POC: JOHN R. HESS, CALIFORNIA DIVISION OF SAFETY OF DAMS, 916-323-1435

(Editor's Note: John Hess, who wrote this article, is an engineer in Engineering Division, Sacramento District. He is currently on a yearlong detail with the California Department of Water Resources, Division of Safety of Dams.)

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ICOLD ANNUAL MEETING AND SYMPOSIUM

The 67th Annual Meeting of the International Committee on Large Dams (ICOLD) will be held 19-25 September 1999 in Antalya, Turkey. In conjunction with the annual meeting, a symposium will be conducted on 23 September 1999 and a workshop on 24 September 1999. Arthur Walz (CECW-EG) and Earl Eiker (CECW-EH) will represent the U.S. Army Corps of Engineers at the meeting.

The subject of the one-day Symposium is “Dam Foundations – Problems and Solutions.” The aim of the Symposium is to exchange knowledge and experience on dam foundation design and construction and to discuss problems encountered in foundations among engineers, scientists, contractors and other professionals working in the field of dam engineering and construction. The emphasis will be on case histories.

The following topics will be covered during the symposium:

- Design and construction of dams on permeable soils and rocks and methods of foundation treatment and design for water tightness or acceptable seepage;
- Ground improvement techniques applied in dam foundations;
- Settlement of dams due to compressibility of foundation soils and rocks, and its effect on behavior of dams, including earthquake effects;
- Design and construction of dams on unfavorable formations-case studies (Karstic, collapsible, soft, etc.); and
- Problems of abutment and foundation stability.

The subject of the workshop will be “Benefits of and Concerns about Dams.” Today living conditions of billions of people are improved by the construction of dams. Besides the essential need for potable water, production of food through irrigation, energy and power production, flood control, provision of recreational facilities are among the major benefits of dams. On the other hand any negative social and environmental impact of dams and reservoirs must be kept to a minimum. Dam engineering professionals today are well aware of these facts and concerned about the environment, both natural conditions and social aspects. Environmental engineers and specialists from related disciplines assess the environmental effects to reach sound solutions. Planners, engineers and scientists today design projects, which take into account and reduce the cost to society and the environment. Benefits and costs as well as social and environmental considerations form a common basis for decision making. To focus attention on this very important issue and to share practices and experiences of different countries, a half-day workshop on “Benefits of and Concerns about Dams-Case Studies” shall be organized on 24th September 1999 morning.

The following topics with emphasis on case studies will be discussed during the workshop:

- Major benefits of dams, including flood control, energy and power production, agricultural and food production, water supply, navigation, recreation and environmental enhancement;
- Management of concerns, including environmental, social and cultural effects;
- Evaluation procedures and decision making, including cost/benefit analysis, discounted cash flow methods, practicability of small scale or other alternatives to dams; and
- Methods of achieving consensus, including public participation in the implementation process, definition of goals, understanding the role of interest groups, the role of funding agencies.

To enrich the experiences of delegates by organization of demonstration, interactive programs and exhibiting the latest advanced technology/practices being used in dam engineering; an exhibition is being organized from 23 to 25 September 1999, at Pyramid Congress Centre in Antalya. In conjunction with the DAM CONSTRUCTION '99 International Fair will be organized at the same venue of 67th Annual Meeting of ICOLD. The fair is open to participation of all national and foreign companies active in dam construction industries. Energy, irrigation, water supply and flood control are one of the basic aims of the social and economic development around the world. Increasing demand of those factors in Turkey and all over the world necessitates the follow up to the latest development in this sector. The prime objective of the DAM CONSTRUCTION '99 International Fair is to provide an excellent opportunity for exhibitors and visitors to get the first hand information for state-of-the-art technologies, to exchange of views, to widen their personal and professional contacts and to furnish an ideal atmosphere for technical, economical and commercial co-operation. The Turkish National Committee encourages all national and foreign entities to take advantage of this opportunity to demonstrate their ability in dam construction new technologies in the DAM CONSTRUCTION '99 International Fair, organized in conjunction with ICOLD 67th Annual Meeting. The exposition will attract manufacturers, construction industries, consultants, investors, joint venture partners and software programs besides providing an excellent opportunity for interaction and participation in Turkey's development in dam engineering.

POC: ART WALZ, CECW-EG, 202-761-8681

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CANADIAN DAM ASSOCIATION 1999 CONFERENCE

“Management of Dams for the Next Millennium” is the theme for the Canadian Dam Association (CDA) 2nd Annual Conference to be held October 3-7, 1999, at the Four Points Hotel, Sudbury, Ontario. The conference provides delegates the opportunity to view the latest innovations in products and technological services. Exhibitor booths will be situated alongside the technical session facilities for ease of access and ongoing discussions.

In addition to the CDA Annual General Meeting, the conference will include workshops on “Risk – Its Concept, Evaluation and Application”, “Management of Tailings Facilities”, and “Evaluation of Dam Performance”. The technical program will in presentations on the following subjects:

Climatic Extremes: Prediction, Changing Trends, Societal Impacts, and Design Implications

Perpetual Care, Liability and Responsibility: Design, Maintenance, Monitoring, Ownership Issues

Aging of Dam Structures: Deterioration Issues, Remedial Measures, New Materials

Dams for the Year 2000 and Beyond: Population Growth and Encroachment, Land Use Pressures, Design Improvements, Is there a Future for New Dams?

For more information about the conference see the CDA Internet site at <http://www.cda.ca/>. Or contact Karlis Jansons, P.Eng, c/o Golder Associates, Ltd., 662 Falconbridge Road, Sudbury, Ontario, Canada P3A 4S4. Kalis may be reached by telephone at (705) 524-6861, by Fax at (705) 524-1984, or by E-mail at kjansons@golder.com.

POC: CHARLES PEARRE, CECW-EP, 202-761-4531

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Update

STRATEGIES FOR MAINTAINING TECHNICAL EXCELLENCE

Last month, the Engineering and Construction News included an article on the Business Plan for Maintaining Technical Excellence. At the end of that article we promise more information on the strategies for maintaining technical excellence. Strategies have been identified in three areas for maintaining excellence. These strategy areas work, staffing, and professional development and incentive.

I. In the area of work distribution, regionalization will be used to supplement an individual District's workload and provide sufficient technically challenging work to maintain and enhance the expertise needed to serve and support the customers within a specific regional area. Regionalization maximizes teamwork and aligns capabilities to obtain efficiency and improve the quality of the product we deliver to our customer.

Where existing technical expertise does not exist in sufficient areas or numbers, form centralized project delivery teams with the needed expertise, from across the Corps and private industry, to provide comprehensive solutions to our customer's challenging problems. Leverage the needed expertise both internal and external to the Corps. Foster a culture of resource sharing among the districts and laboratories, providing seamless access to the full range of Corps capabilities.

II. Staffing the project delivery team for the specific jobs is the second strategic area. The quality of the products and problem solutions the Corps provides our customers is directly dependent on the technical excellence of our engineers, architects and scientist. The Corps strategy of investing in people will help recruit, develop and retain the technical excellence needed to enhance our service to the Army and Nation. Providing meaningful and challenging work will help develop the skills and expertise necessary to achieve the Corps' long term vision. In addition, investment will consist of mentoring, and on the job training; and graduate training with local universities as well as Corps sponsored training. The engineering support needed for small local projects may be retained at each geographical district. The full design districts or centers will provide the expertise for the complex projects including military, O&M and civil works.

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- a. A proper mix, by discipline, function and type of work must be retained at each full design district or center to maintain the technical excellence needed to revolutionize effectiveness in addressing the customer's problems. Maintain a minimum volume of challenging work to build and retain a full spectrum team of engineers, architects and scientist to respond to our nation and customer's needs in peace and war. For example, the minimum requirements to maintain a viable and effective technical capability for the design and engineering support for a military program is about 70 design professionals plus support staff. This equates to a minimum design program of \$400 million in annual construction based on maintaining a 30 percent in-house design percentage. With smaller annual construction programs, the in-house design percentage would increase. Other functional areas such as construction, planning and civil works design have similar minimum staffing levels to maintain a viable and effective capability, as well as develop the technical excellence needed to support the Army and our other customers. When the volume of work fluctuates below the minimum to maintain a full team but projections are for the work to be available in the future, additional work must be shared among regional centers to leverage capabilities.
 - b. In some cases specialized expertise is not going to exist at each full design district. Rapidly changing technology may make it difficult to acquire hardware, software and maintain expertise to perform the work. The total design and construction effort for some types of facilities or systems, for example hydrant refueling systems, utility monitoring and control systems, and hydroelectric projects, is not sufficient in any one district to maintain that expertise. These facilities and systems are critical to our customers and our ability to serve the Army, justifying the need to maintain this expertise within the Corps. This capability could be centralized at one location, leveraging engineering and technology to enhance the Corps mission areas. The continuing need for each center should be carefully and periodically evaluated. Each of these centers must obtain sufficient work from across the district boundaries to maintain and enhance the required technical expertise within the Corps. Each center is an extension of the regionalization concept to align capabilities across the Corps. For unique short-term requirements the districts can draw on the registry of consultants, the Corps' laboratories and outside consultants

III. The third strategy area is Professional Development & Incentive Strategy. The goal of this strategy is to provide growth opportunities to meet emerging customer and Army needs. Invest in people to enhance core competencies by promoting long-term professional growth to maintain a full spectrum of capabilities critical to the Army. Customer satisfaction will be enhanced through improved business practices, engineering and innovative use of technology.

- a. To achieve our vision of a seamless Corps and lead the changes required in technology and work for future customers, a corporate commitment is required to recruit, retrain and reward individuals and create a bold, vibrant organization. An organization that has a reputation for professionalism, excellence and mission accomplishment.
- b. A clear commitment to creating the premier design and engineering organization is stressing design and engineering technical excellence. Assure minimum requirements for technical competency and ethical and professional standards by requiring professional registration or certification. College graduates would be hired with the clear understanding that professional registration or certification is a basic requirement. Failure to satisfy this requirement would limit their

advancement beyond the GS-11 level. Provide incentives for attaining professional registration by reimbursing for review classes, examination fees and providing cash awards for success.

- c. Invest in people by making a strong corporate commitment to obtaining advanced degrees, offering long-term training opportunities and participation in professional societies and committees. Share the costs of successfully completing graduate level education in academic fields, which materially contribute to enhancing capabilities and providing innovative solutions for our customers. Share the costs of participating in the activities of selected professional technical organizations, national consensus standards organizations, or interagency technical committees, which build regional interface, and augments our capabilities to serve our customers.
- d. Make a clear corporate commitment to reward those who have achieved excellence. To retain a critical core of senior technical experts in the district offices, allow competitive advancement of senior experts to the GS-13 level. Provide a clear career ladder for the continued advancement of technical experts throughout the organization.

Our comments are welcome on the business plan presented in the July issue and on the strategies presented in this issue. Forward comments to either Joe McCarty, CEMP-ET (joe.a.mccarty@usace.army.mil) or myself (donald.r.dressler@usace.army.mil).

POC: DON DRESSLER, CECW-E, 202-761-4536

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CORPORATE TECHNICAL CAPABILITY ASSESSMENT

HQUSACE has chartered several workgroups whose objective is to proactively develop and maintain capability Corps-wide to meet present & future missions. One of the chartered workgroups is focusing on technical capability, which includes architects, engineers and scientists. Mr. Don Dressler leads this workgroup. The goal of the workgroup is to provide a formal report to the CECW-E on the state of the technical capability within USACE to meet present and future mission requirements IAW the Corps Vision, Business Practices, the PM Business Process (ER5-1-11) and Regional Business Center concept (ER 10-1-2/draft). The workgroup has planned a two-phase approach. The first phase consists of a brief questionnaire to the field that addresses current and future technical capabilities. Phase two will include a more comprehensive survey and the preparation of a business plan for enhancing Corps technical capability. The workgroup has recently completed a draft questionnaire and briefed it to the CECW-E. The workgroup is coordinating this effort with the Directorates of Civil Works, Military Programs and Human Resources. Once finalized the questionnaire will be sent to Division and District Commanders. After the District and Division Commanders have responded to it members from the workgroup will visit several of the Division offices to discuss the questionnaire in detail (at the discretion of the Division Commander, District staff may also participate in the discussions). Following the Division meetings, conclusions about Corps technical capability needs and issues will be presented to the CECW-E and the Director of Civil Works.

POC: DAN CASAPULLA, CECW-ET, 202-761-4535

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NAME CHANGE FOR THE TRI-SERVICE CADD/GIS TECHNOLOGY CENTER

The Executive Steering Group (ESG) of the Tri-Service CADD/GIS Technology Center (the Center) voted at their June meeting to change the Center's name to the CADD/GIS Technology Center for Facilities, Infrastructure, and Environment. The new name reflects the expanding vision and growing customer base of the Center within the Department of Defense as well as new users from other Federal

agencies, industry, academia, and state and local governments. Additionally, the ESG has been renamed the Board of Directors, and the Executive Working Group (EWG) and the Field Technical Advisory Group (FTAG) are being combined to become the Corporate Staff for the Board of Directors. A Business and Marketing Plan and a new charter for the Center are currently being developed and will be posted on the Center web site when finalized and approved by the Board of Directors.

POC: JEAN MCGINN, CEMP-EE, 202-761-1052

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EXECUTIVE ORDER 13101, “GREENING THE GOVERNMENT THROUGH WASTE PREVENTION, RECYCLING, AND FEDERAL ACQUISITION”

On September 14, 1998, the President signed Executive Order (EO) 13101. The goal of the EO is to improve the Federal Government’s affirmative procurement and use of products manufactured from recycled materials and environmentally preferable products and services consistent with the demands of efficiency and cost effectiveness. The preamble of this EO states: “It is the national policy to prefer pollution prevention, whenever feasible. Pollution that cannot be prevented should be recycled; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner. Disposal should be employed only as a last resort.” EO 13101, which expands on the requirements of EO 12873, replaces and supersedes EO 12873 (31 May 1995.) USACE has pursued a number of initiatives, which serve the intent of EO 13101. Several Corps of Engineers Guide Specifications (CEGS) have been revised to incorporate cost-effective waste prevention, recycling and acquisition of recycled and environmentally preferable products. What is new in EO 13101? Additional emphasis on the elimination of virgin material requirements; use of biobased* products (listed on the USDA Biobased Product List); use of recovered materials; reuse of product; life cycle cost; recyclability; use of environmentally preferable products; waste prevention (including toxicity reduction or elimination); and ultimate disposal. The EO requires each agency (as used here, the Department of Defense) to establish either goals for solid waste prevention and recycling or a goal for solid waste diversion** to be achieved by January 1, 2000. DOD had already achieved the 30% reduction set for 1999 under the previous EO. Each agency is also required to develop a strategic implementation plan and establish long-range goals to be achieved by the years 2005 and 2010. OSD is currently in the initial stages of developing the agency plan. Progress on attaining these goals should be reported by the agencies and will be included in a biennial report to the President. In line with these new requirements passed down by DOD, the Army is in the process of finalizing an interim policy for the management of solid waste generated during construction and demolition projects. It is specifically intended to minimize the amount of non-hazardous solid waste disposed through landfill or incineration and promote more efficient use of new construction materials. The Defense Department goal, which the Army will adopt, is to achieve a more than 40% and 50% diversion rates for non-hazardous solid waste by the end of FY2005 and FY2010 respectively. This means that USACE will be initiating actions to implement the new Army policy in the near future. Additionally, EO 13101 requires the Environmental Protection Agency to evaluate affirmative procurement programs as an integral part of their multi-media federal facilities inspections. Stay tuned for more information.

* “Biobased product” means a commercial or industrial product as designated by the Department of Agriculture (other than food or feed) that utilizes biological products or renewable domestic agricultural (plant, animal, and marine) or forestry materials.

** “Diversion” is the reduction of waste ordinarily disposed in a municipal/debris landfill or incinerator to a recycling facility or to another destination for reuse.

POC: SUE ABU-EID, CEMP-EC, 202-761-4539

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EXECUTIVE ORDER 13123, "GREENING THE GOVERNMENT THROUGH EFFICIENT ENERGY MANAGEMENT"

On June 3, 1999 President Clinton signed Executive Order 13123 for energy management in the Federal Government. The Executive Order has a number of goals and strategies for energy management. Major ones are listed below. As USACE becomes more involved in OMA type work, it is prudent to become familiar with these requirements. Department of the Army is expected to pass on these goals to MACOM's and installations. Executive Order is posted at www.eren.doe.gov/femp.

The Department of the Army Goals are:

- 35% improvement in existing buildings energy efficiency by 2010 using 1985 as a base year.
- 25% improvement in existing industrial and laboratory facilities by 2010 using 1990 as base year.
- 30% reduction in greenhouse gas emissions by 2010 using 1990
- Expanded use of renewable energy.
- Enhanced water conservation.
- Consider using Energy Savings performance Contracts (ESPC) and utility services to design and construct sustainable new buildings.

These goals provide additional opportunities for our USACE Districts to serve their installations and demonstrate our capabilities in supporting the total Army and the nation.

POC: HARRY GORADIA, CEMP-ET, 202-761-8622

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Installation A-E Contracting Support

This article follows up a similar one in May's newsletter. This month we are summarizing the results of a brief survey we sent to fourteen major military districts and outlining some actions that you can take to enhance your architect-engineer (A-E) contracting support to Army installations.

The installation A-E contracting workload varies widely from 25 indefinite delivery contracts (IDC's) and 150 task orders annually at Baltimore District to no recent contracts or task orders at a couple districts. Most districts believe that they are doing a good job of providing A-E contracting support to their installations; however, very few had a definitive method of continuously measuring customer satisfaction. A-E contracting support should be regularly evaluated by informal and formal means (project manager inquires, senior management visits, written surveys, etc.) to determine if we are satisfying our Army customers.

The survey indicated that the cost to procure an IDC for installation use varies from \$4,500 to \$18,000 (average \$10,500) and the time ranges from 75 days to 433 calendar days (average 192 days). The cost to review and issue a task order which was negotiated by an installation varies from \$200 to \$1200 (average \$600) and the time varies from 1 day to 34 calendar days (typically 3-5 days). How does your performance compare to these averages?

Some of our customers apparently do not think that these costs and times are reasonable as evidenced by the move by some Army commands to seek their own A-E contracting authority. We encourage you to closely review your A-E contracting processes and discuss them with your customer to ensure that you are providing economical and timely service to your installations. Have you incorporated the appropriate streamlining techniques in Appendix I of EP 715-1-7, Architect-Engineer Contracting

(previously Appendix G of ER 715-1-20)? For example, have you minimized the number of people involved in processing contracts and task orders and does each person add commensurate value to the contract quality? Have you delegated approval authorities to the lowest reasonable level? Are you using multiple awards from one synopsis to reduce procurement costs?

Most of the districts appoint contractor officer's representatives (COR's) at the installations. However, only four districts appoint ordering officers at the installations. We support empowering the installations and feel that a contracting partnership between USACE districts and their installations provides an effective arrangement for the Army. Due to our substantial experience in A-E contracting, we believe that USACE is in the best position to solicit, negotiate and awards IDC's for installation use, and to handle protests, disputes, liability actions, and other significant contract issues. And the installations are in the best position to scope, negotiate, issue and administer individual task orders for their O&M projects. Hence, we encourage districts to appoint COR's and ordering officers at the installations. Assist them with training as needed; the A-E Contracting PROSPECT course is an excellent training source.

In summary, we need to pay close attention to the A-E contracting support we provide to Army installations. If we don't provide cost-effective, timely and responsive service, our customers will "vote with their feet and dollars" and we will lose this mission and work. Please e-mail or call the undersigned if you have comments on this issue. Also, please share this article with other members of the project delivery team in your district.

POC: DON EVICK, CEMP-EC, 202-761-1053

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UPDATE ON THE RESIDENT MANAGEMENT SYSTEM (RMS)

Training, deployment and additional development activities continue on the *Windows* version of RMS. A series of RMS training classes for personnel from Great Lakes and Ohio River Division, South Atlantic Division, Huntsville and representatives from some other commands have been held in the late spring and this summer at Wilmington District facilities in North Carolina. A pause in deployment to sites was necessary to give developers time to make some improvements to the Current Construction Working Estimate (CWE) structure and other financial management aspects of the application. Developers are also working to have a basic contractor module of Windows RMS developed by the end of FY 99. Finally, the RMS team has been working closely with the PROMIS developers to finalize and test the RMS-PROMIS interface that will be used to share construction-phase information captured in RMS with the entire project delivery team via PROMIS. This interface was impacted by the CWE and other financial changes in RMS, and now is moving towards completion, site testing, and release this September.

The arrival of the Standard Procurement System (SPS) -- the DOD product that will replace SAACONS across USACE-- at Vicksburg and the start of training at other USACE districts raised several questions in the field about SPS and RMS. On 6 August, MG Fuhrman, USACE's Deputy Commander, signed out a memo entitled "Integrated Plans for Fielding DOD's Standard Procurement System and Resident Management System in USACE." This memo addresses several of the questions and discusses plans to develop an RMS-SPS interface for construction contract modifications (SF 30s) developed and approved by field office administrative contracting officers (ACO's). The memo is addressed to MSC commanders and is also posted on the HQUSACE Military Programs E&C Construction Branch web site for your information. Bottomline is that SPS and RMS, like CEFMS

and SPS, are complementary, not competing or in conflict. When developed and fielded the RMS-SPS interface will help the project delivery teams work together in a more integrated manner.

The last topic we want to discuss is the issue of information technology architecture. As in construction, there are various approaches to architecture. For Windows RMS, we are intensively pursuing the possibility of using special client-server architecture known as MetaFrame "thin client" for the RMS database and application. If successful, this MetaFrame thin client approach would allow the RMS operational database and application to be centralized, either at a CEAP center serving the district, or at the district headquarters. This would provide a more robust and easier to deploy approach for Windows RMS. The other approach used in deployments so far is to use a local server for an area. This means that the RMS operational database and application are installed on a server in the local area (e.g., area or resident office) and the local RMS database is periodically replicated (or updated) to the centralized database of record located at the CEAP center. This local server approach provides the means for a greater local control and an assurance of speed to users under normal conditions, but requires more local installations and maintenance of the database and application. There are other aspects to consider for each approach, and we are preparing for a test in August and early September to conclusively determine the viability, performance and economics of each architecture alternative. Our hunch is that a combination of each will be the optimum.

Lots of things are happening with RMS and we recommend that you periodically check out the HQUSACE MP Construction Branch homepage as well as the RMS Center homepage at <http://winrms.usace.army.mil> to keep informed. We deeply appreciate all the hard work of the many RMS coordinators at districts and divisions, their information management partners, the RMS Center staff and trainers, as well as the users and soon-to-be users at districts and field offices. Watch the next E&C Newsletter for a RMS update.

POC: JIM LOVO, CEMP-EC, 202-761-4804

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MILITARY REAL PROPERTY TRANSFERS: UPDATE

The importance of timely, proper transfers of completed military construction projects to customers real property accounts and off USACE accounts was discussed in the last issue of E&C News. As was pointed out, being successful at this task requires participation and performance by the entire project delivery team -- throughout the entire project delivery process. On 28 July 1999, HQ Department of the Army issued interim policy guidance on processing capital improvements to the Real Property inventory. This interim policy guidance came in the form of a memo to MACOM commanders from MG Van Antwerp, the Army's Assistant Chief of Staff for Installation Management in the Pentagon. The memo establishes interim policy for determination and posting of capital improvements to the Army's real property inventory; procedures for preparation of the DD Form 1354 (Transfer and Acceptance of Military Real Property); and reporting procedures for construction-in-progress. The policies are effective immediately and will remain in effect until the update of affected regulations such as AR 405-45, DA PAM 405-45, and DA PAM 420-6.

What does this mean to you at the district or field office? It means that your Army installation partner will be expecting you to implement these interim policies for the next project you turnover or the next draft DD Form 1354 that you prepare during the design phase. A final reminder -- The U.S. Army Audit Agency will perform audit work at a variety of locations throughout the Army during July-December 1999. Let's make sure each part of the project delivery team provides the support needed by the Army to pass this piece of the CFO test! Dave Purcell (David.Purcell@hqda.army.mil) is the

POC for this topic on the ACSIM staff and can forward you a copy of the 28 July guidance. We will also get the ACSIM interim policy posted on the HQUSACE MP home page.

POC: *Jim Lovo, CEMP-EC, 202-761-4804*

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Dam Safety

DAM SAFETY 1999

“Dam Safety 1999” is the Association of State Dam Safety Officials (ASDSO) Annual Conference, Exhibit Show, and Technical Seminar, which is scheduled for St. Louis, Missouri, October 10-15, 1999. ASDSO is offering a reduced early bird register fee of \$300 for members and \$350 for non-members for those who register by September 15. ASDSO accepts the Government IMPACT charge card in order to make registration easier for your administrative personnel.

If you are not a member of ASDSO, join on the registration form and receive a \$50 discount on your registration fee. Print the registration form from the ASDSO Internet site at <http://member.aol.com/damsafety/homepage.htm> and mail the form to ASDSO, 450 Old Vine St., 2nd Floor, Lexington, Kentucky 40507, or fax the form to (606) 323-1958.

At the conference you will receive more than 24 hours of educational instruction conducted by experts in at least 15 technical fields including a number of our own Corps of Engineers personnel. Conference participation will qualify you for professional continuing education units (CEU's). In addition, you will have opportunities to network with over 600 dam safety professionals from the U.S. and several foreign countries.

Admission to the annual exhibit and poster shows featuring the latest in technology, services and award-winning design ideas is included in the registration fee. The complete conference proceedings on CD-ROM, accompanied by a user-friendly compendium of presentation abstracts with which to review session topics ahead of time will be provided to all participants.

Additionally, registrants will receive the participant list, an ASDSO Year-In-Review Newsletter issue, and the Annual Survey of State Dam Safety Programs.

On Thursday and Friday, October 14-15, ASDSO will sponsor a workshop on risk assessment. The workshop will provide practical insights to the application and fundamentals of risk analysis, risk assessment, and risk management. The workshop is designed to provide participants with an appreciation for the following:

- The framework and scope of risk analysis, risk assessment, and risk management applications,
- Considerations for selecting an appropriate scope for a risk analysis to address different dam engineering and safety problems,
- The importance of failure mode identification and engineering judgement in risk analysis,
- How loading condition and response probability estimates are input to risk analysis,
- How loss of life and economic consequences are estimated,
- And many more aspects of the risk subject

In a special evening session on Thursday, October 14, participants will also complete a sample problem or sample application in a small team setting. An optional afternoon session on Friday, October 15 will address a portfolio risk assessment example problem. Course leaders will be Dr. David Bowles, Utah State University and RAC Engineers, Dr. Marty McCann, Stanford University and Jack R. Benjamin & Associates, and Mr. Larry Von Thun, Consultant, formerly with the US Bureau of Reclamation. Register for this workshop on the conference registration form.

The conference location in St. Louis is The Hyatt Regency at Union Station. The Hyatt Regency is offering an ASDSO conference rate of \$130 single or \$145 double occupancy. Please make hotel reservations by calling the Hyatt directly at (314) 231-1234. Rooms are being held for ASDSO until September 10, 1999, and reservations made after that date would be on a space-available basis. As part of Union Station, a National Historic Landmark, the Hyatt reflects the grace of Romanesque architecture, and enjoys proximity to numerous cultural and visitor attractions. Union Station spans over 100 acres, and contains more than 100 specialty shops and restaurants, a comedy club, a one-acre lake, and four active train tracks.

Poster displays will be located near the exhibit ballroom, and presenters will be on hand to discuss their projects during exhibit hours.

Spouses and other guests are welcome and encouraged to register for the conference and attend the guest breakfasts on Sunday and Monday, the nightly receptions and the Awards Banquet. The fee for guest registration is \$60.

ASDSO welcomes conference participants with special needs. Please call Susan Sorrell, Conference Coordinator at (606) 257-5146 to discuss accommodations and arrangements.

If you have any questions, call ASDSO at (606) 257-5146 or E-Mail the question to damsafety@aol.com.

POC: CHARLES PEARRE, CECW-EP, 202-761-4531

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BIENNIAL REPORT TO THE PRESIDENT AND CONGRESS ON DAM SAFETY

The Biennial Report is the opportunity for Federal agencies to report the status of their progress on implementation of the Federal Guidelines for Dam Safety. The Corps submits the Department of Defense input to the Biennial Report. The Fiscal Year 1998 and 1999 input was delivered to FEMA on 29 July 1999. The submission deadline established by FEMA has been moved ahead by two months from previous years, to allow additional integration time, reflective of the additional focus and efforts on the National Dam Safety Program by FEMA. FEMA will submit the final report to Congress by 30 December 1999.

The report documents full compliance to the Federal Guidelines by DOD, but indicates increasing long-term concerns - shared by the overall dam safety community - about the downsizing workforce, shrinking budgets, and decreasing specialized technical expertise due to the reduction in new dam construction in the United States. The report documented steps being taken by the Corps to minimize these concerns. The Air Force portion of the report suggested that the Corps take the lead for a consolidated DOD Dam safety program as a way to strengthen the overall program.

Thanks to all the Districts, Divisions, and the tri-Services, who provided input and suggestions for the Report.

POC: BOB BANK, CECW-EP, 202-761-1660

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MSC DAM SAFETY COORDINATORS MEETING

On 28 and 29 July, twelve Dam Safety Coordinators and Dam Safety Officers met in Washington, DC, to discuss current issues involving Dam Safety.

The agenda for the meeting listed 17 items of discussion. One of the items of special interest was the policy on Reporting Operational Restrictions, which was issued on 26 July 1999. This reporting requirement was established to help provide the Corps Dam Safety Officer a current assessment of changes in the condition of our dams. Under this policy, all operational restrictions on dams scheduled for or lasting longer than 48 hours must be reported to the Dam Safety Team, CECW-EP.

Upcoming work at HQUSACE to revise ER 1110-2-1155, ER 1110-2-1156, and ER 1110-2-100 was discussed with emphasis on the need for field input in these areas. One of the goals of the revision will be to combine the Dam Safety related regulations into a single document. Among the ideas discussed was the establishment of a Dam Safety Working Group which would include the MSC Dam Safety Coordinators, the CECW-E Dam Safety Team, and Army MACOM Dam Safety Representatives. In the area of Periodic Inspection Reports, the use of electronic reporting was discussed. In the planned move of HQUSACE from the Pulaski Building to the General Accounting Office Building, CECW-E will lose the space required for storing Periodic Inspection Reports. Therefore, a change in the distribution of the reports will be issued in the near future.

The House Appropriations Committee report for Fiscal Year 2000 looks good for Dam Safety with all the budgeted Dam Safety and Major Rehabilitation projects remaining in the final report at the full budget amounts. Initial preparations for the Fiscal Year 2001 budget submission indicate that the Dam Safety Wedge will be included in the budget. This will allow us to provide Construction, General, funds for Preconstruction Engineering and Design of Dam Safety Assurance Projects upon approval of the evaluation report by the Corps Dam Safety Officer.

Another issue at the Washington level which will effect Dam Safety is the Lucas Bill (H.R. 728). The Lucas Bill would authorize the Natural Resource Conservation Service (NRCS) to modify dams built under their project dams program in the 1950's and 1960's. Current indications are that if this \$600 million authorization is passed, that some of the work would pass the Corps of Engineers Districts. A side note to this issue is the request by Congressmen from Minnesota and the Dakotas to include all the WPA (Works Products Administration from the Roosevelt era) in the authorization. There were over 40,000 dams funded by the WPA and one of the first actions if these dams are included in H.R. 728 would be to identify the WPA dams. Also, NRCS has indicated that it is not interested in the WPA dams, leaving that area to the Corps or other Federal agencies.

The next opportunity of Corps Dam Safety Coordinators to meet will be in October at the ASDSO Annual Conference in St. Louis. See the article on [Dam Safety 1999](#) above for more information on the conference.

POC: CHARLES PEARRE, CECW-EP, 202-761-4531

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Technical

BARGE IMPACT DESIGN GUIDANCE RESCINDED

During the month of July ETL 1110-2-338, Barge Impact Analysis, was rescinded by EC 25-1-281. The single degree of freedom model in ETL 338, long believed to be overly conservative, was proven so by full-scale barge impact tests conducted at the decommissioned Gallipolis Lock last December under the auspices of the Innovations for Navigation Projects Research and Development Program. Data gathered during these tests will be used to develop a multi-degree of freedom model, which will lead to more realistic barge impact loads. Guidance, based on the new model, is currently scheduled to be issued early in FY 2001. Interim guidance is available on a case-by-case reimbursable basis by calling Ms. Anjana Chudgar, CELRL-ED-DS, at (502) 582-5784. Ms. Chudgar is recognized as a national expert in the field and will assure that barge impact design loads are reasonable and consistent across the USACE by coordinating with HQUSACE and the Engineering Research and Development Center (WES) researchers.

POC: BRUCE RILEY, CECW-ET, 202-761-8597

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ENGINEER PAMPHLET 715-1-7, ARCHITECT-ENGINEER CONTRACTING

The subject Engineer Pamphlet (EP) was signed by the Chief of Staff on 15 July 1999 (although the EP is dated 31 May 1999). EP 715-1-7 replaces ER 715-1-20, same subject, which was rescinded by EC 25-1-279, 15 July 1999. The EP and a list of changes compared to ER 715-1-20 can be found at the CEMP-EC Internet site: <http://www.hq.usace.army.mil/CEMP/C/CEMP-C.HTM>.

As did ER 715-1-20, EP 715-1-7 provides guidance and procedures for contracting for A-E services and is intended to promote fair, efficient and consistent A-E contracting practices throughout USACE. The publication has been updated and reissued as an EP instead of an ER since it is largely procedural in nature (versus policy, which is contained in the Federal Acquisition Regulation (FAR), and its supplements). Field personnel have some discretion in implementing EP 715-1-7, however any variations must still comply with the FAR and its supplements and be documented in the contract file.

EP 715-1-7 is organized the same as ER 715-1-20, with seven chapters (corresponding to the various phases in the A-E contracting process) and numerous appendices. There are four new appendices as follows:

- Appendix B - A-E Contracting Program Checklist
- Appendix C - A-E Contract/Task Order Checklist
- Appendix D - Internet Addresses for A-E Contracting
- Appendix N - Example Selection Scoring System

Appendices B and C are useful for management oversight.

POC: DON EVICK, CEMP-EC, 202-761-1053

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SPECIFYING /SELECTING TRANSFORMER TAPS

Transformer taps do not necessarily have to be two taps above/two taps below normal. There is a sound technical basis for specifying/selecting the proper taps required for any transformer application. This article attempts to shed some light on this subject.

Taps on transformers are used as a means, to a limited degree, to adjust the primary-to-secondary turns ratio to obtain the proper secondary voltage on the output of a transformer. For distribution transformers, the taps are normally installed on the primary winding of the transformer. Normally, each tap has a unique tap position number [1,2,3 etc.] or letter [A, B, C, etc.] associated with it. In addition, each tap position has a unique voltage associated with it. The following is an example of a typical nameplate data for transformer with five taps:

12,600V--Tap 1 [or A]	11,700V--Tap 4 [or D]
12,300V--Tap 2 [or B]	11,400V--Tap 5 [or E]
12,000V--Tap 3 [or C]	

Let's examine what the voltages and associated taps stand for. First, assume that the secondary voltage of this transformer is rated 208Y/120V. What the nameplate data says is that if the tap of this transformer is set at tap 1, then a primary voltage of 12,600V would be required on the primary terminals of the transformer in order to get 208V/120V on the secondary side. Similarly, at tap 2, 12300V will be required to obtain 208Y/120V and so on. Alternatively, if the voltage applied to the primary terminals of a transformer differs from the voltage associated with a particular tap, then the secondary output voltage varies from the rated secondary voltage in direct proportion to the turns ratio of the transformer windings. For example, lets assume that 12000V is applied to the transformer at each tap position and see what happens.

At tap 1, the secondary voltage will be -- $12000V/12600V \times 208/120V = 198V/114V$.

At tap 2, -- $12000V/12300V \times 208Y/120V = 203Y/117V$.

At tap 3, -- $12000V/12000V \times 208Y/120V = 208Y/120V$.

At tap 4, -- $12000V/11700V \times 208Y/120V = 213Y/123V$.

At tap 5, -- $12000V/11400V \times 208Y/120V = 219Y/126V$.

From the foregoing, it is apparent that the proper secondary output voltage can be obtained by proper selection and setting of taps, in order to account for variations in the supply, or primary, voltage applied to the transformer. Also, depending on the number of taps available, the taps allow us to compensate for the voltage drop through the transformer and distribution circuits since we can obtain secondary voltages higher than the rated secondary voltage.

Taps are based on a fixed percentage of a specific high voltage rating referred to as the rated high voltage. Thus, the first step is to select the proper rated high voltage rating of the transformer. Normally, the rated high voltage is equal to one of the standard voltage ratings that are listed in NEMA/ANSI Standards. Although transformers can be built with almost any rated high voltage, a

premium is normally charged for non-standard voltage ratings and therefore, it is good practice to specify a standard voltage rating. The rated high voltage that is selected will be the standard voltage that is closest to the actual operating voltage (AOV) of the system to which the transformer will be connected. Therefore, 2400V rating would be selected for a 2400V system, 7200V for a 7200V systems, 12000V for an 11500V systems, and so on.

After the rated high voltage is selected, the next step is to select the taps. Distribution transformers can be supplied with no taps, four taps or six taps, depending on the application. Also, transformer taps can be provided below or above the rated high voltage or a combination of taps above/below the rated high voltage. For distribution transformers, taps are normally provided in 2-1/2% increments of the rated high voltage. Taps above the rated high voltage are referred to as full capacity above normal (FCAN) taps and taps below rated high voltage are referred to as full capacity below normal (FCBN) taps. To determine the number of FCAN/FCBN taps required for a particular application, consideration must be given to the variations in the AOV and the voltage drop through the transformer and secondary distribution system. For example, consider the case where a system is operated at 11500V. In this case, since the AOV is not equal to a standard high voltage rating, the closest standard rating of 12000V would be selected since it is closest to the AOV. As an example, if two FCAN taps and two FCBN taps are selected, the transformer would have the following taps:

12,600V -- Tap 1	11,700V -- Tap 4
12,300V -- Tap 2	11,400V -- Tap 5
12,000V -- Tap 3	

Note: Each tap increment = $\pm 12000V \times .025 = 300V$

For AOV = 11,500V, we would obtain the following secondary voltages for a 120/208V system:

Tap 1 -- 190Y/110V	Tap 4 -- 204Y/118V
Tap 2 -- 194Y/112V	Tap 5 -- 210Y/121V
Tap 3 -- 199Y/115V	

Let's now examine what happens when four FCBN taps are selected instead. The transformer would then have the following taps:

12,000V--Tap 1	11,100V--Tap 4
11,700V--Tap 2	10,800V--Tap 5
11,400V--Tap 3	

For an AOV = 11,500V, we end up with the following secondary voltages for a 120/208V system:

Tap 1 = 199Y/115V	Tap 4 = 215Y/124V
Tap 2 = 204Y/118V	Tap 5 = 221Y/128V
Tap 3 = 210Y/121V	

If we allow for up to 3% voltage drop in the 11500V feeder, and an additional voltage drop of 1.5-4% through the distribution transformer (the drop depends on size of transformer, transformer impedance and actual load), it is apparent that the secondary voltages at the loads would be lower than the above values and in some cases may be unacceptably low. It is also apparent from the foregoing example

that any tap above 12000V [rated high voltage] would result in unacceptable secondary voltages and most likely the tap will just sit there without ever being used and for that reason it would be more appropriate to select four FCBN taps for this particular application.

On systems where the AOV is practically the same as the rated high voltage, such as on 2400V, 4160V and 12,470V systems, generally speaking all taps should be FCBN since any tap with voltage higher than the rated high voltage would never be used. However, it should be noted that on some systems, the AOV can be up to 2-5% higher than the rated high voltage and, in this case, taps above and below the rated high voltage may be more appropriate. For example, a 2400V system may be operated such that the AOV is 2500V at the source and the AOV near the end of a distribution feeder is 2200V [due to voltage drop]. In this case, a transformer with two FCAN and two FCBN taps would be most appropriate:

2520V -- Tap 1	2340V -- Tap 4
2460V -- Tap 2	2280V -- Tap 5
2400V -- Tap 3	

Note: Each tap increment = $\pm 2400V \times .025 = 60V$

Thus, the transformers close to the source would be operated at tap 1, those at the farthest end would be operated at tap 5 and those falling in between being operated at taps 2, 3 or 4, as appropriate, to match the AOV as close as possible.

POC: Roy Higa, CEPD-ET-E, 808-438-8527

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HYDROGRAPHIC SURVEY IMPROVEMENT TEAM

The New Orleans District (CEMVN) operates 8 survey vessels which work continuously to support dredging operations and report channel conditions to project customers on all CEMVN project waterways. These vessels perform routine surveys and also respond to emergency requests to investigate reports of shoaling or incidents on the waterways. Each vessel carries a crew of 2 or 3 employees, one operating the boat and the other(s) operating the surveying equipment. These vessels navigate along predetermined "ranges" using the Differential Global Positioning System (DGPS) so that data collected previously can be compared with current data and changes in the channel bottom can be detected. The data is then sent to the office where survey plots are processed and forwarded to the appropriate Operations Manager. Dredging can then be appropriately scheduled to prevent a loss of authorized project dimensions and/or navigation bulletins can be issued to project customers. The process of collecting, transmitting, processing, and displaying survey results has been completely reinvented by the CEMVN Hydrographic Survey Improvement Team.

The group was fully empowered to implement new technologies as they became available. While implementing the latest technologies, the team devised new ways to collect, transmit, process, and display the survey data.

In years past, collecting survey data meant dropping lead weights attached to ropes to the channel bottom. Results were recorded in field books. This method has largely been abandoned, but is still used in certain situations to supplement modern methods using depthsounders. Also used were bicycle wheels with a distance wire attached. A counter similar to an auto odometer indicated feet traveled along the range. This provided horizontal control along the range. To guide the vessel and keep it "on

range”, target signs were placed on the bank, which the boat operator used to help him steer his vessel. The soundings were then plotted by hand. From these plots the managers could decide where to dredge and report channel conditions to customers. Electronic controls using modern “mini-rangers” were introduced to improve accuracy. Mini-rangers were miniature remote transmitters placed at known locations on the bank. They would transmit a signal to the survey vessel to help the operator stay on line and indicate distance along the range. The mini-rangers greatly improved accuracy, but were themselves troublesome to maintain, especially if there were a significant number being used on a continuous basis such as in Southwest Pass of the Mississippi River. They were also subject to being damaged during storms. CEMVN now uses the DGPS to establish the position of survey vessels. This system uses satellites, which send a signal to a receiver on the vessel. The accuracy of the basic Global Positioning System (GPS) can only be guaranteed to about 100 meters. The DGPS system increases this accuracy to about 3 meters utilizing a system of beacons maintained by the U.S. Coast Guard. These beacons send out a low frequency signal to a beacon receiver on the survey vessel. Information received from this beacon provides the additional accuracy. The DGPS system is available to survey vessels regardless of their location.

The time necessary to transmit the data from the field has been drastically reduced. In years past, data had to be hand carried to the office. Depthsounders equipped with electronics now send the data to a computer and it is stored electronically. The data can now be sent to the office via satellite phones on the boat. The satellite phones allow the data to be sent directly from a vessel regardless of its location. This is important because many survey areas in CEMVN are extremely remote, and even cellular phone service is not available. The process of transferring survey data from the boat to the office has been reduced from days or hours to minutes.

In order to simplify data collection, a system of standard ranges has been set up for all of the major survey areas in CEMVN. In addition, special requests from pilots and operations managers may require that new ranges be added or old ones be modified. A system of easily processing the data was also necessary. Software to accomplish this was designed by personnel in the Engineering Division, Systems and Programming Section of CEMVN.

One of the most important elements of displaying survey data is combining good background topography with the survey data. This makes the plots much easier to interpret. Systems and Programming Personnel are working with other agencies to provide high quality aerial photo data. When completed, this project will make background data available for any surveys taken in CEMVN. In addition to the above, CEMVN now has a site on the World Wide Web (WWW) where anyone can view the latest survey data or download the CADD files in Microstation Design File (DGN) format. Viewing in this format is only possible with the purchase of additional software that can read DGN files. Therefore, Operations and Engineering Divisions combined resources to purchase software, which enables viewing of this data in other formats also. This software was implemented in August 1998 with the help of Information Management Office’s CADD Support Team. Now any WWW user can access the CEMVN site and download survey data on certain Corps projects. This WWW site will be expanded so that all CEMVN hydrographic survey data will eventually be viewable in this manner. A fringe benefit is that any CEMVN CADD file can be posted on the WWW for viewing. Use of the WWW has allowed two federal agencies, NOAA and NIMA, to access the most current survey and navigation data to update their respective products. NOAA is obviously pleased based upon their 16 October 98 letter to HQUSACE which praised CEMVN for its modernization initiative.

The Corps is realizing considerable tangible savings. Additional manpower would be necessary to collect controlled hydrographic survey data with pre-DGPS technology. Land-based equipment would have to be set up before data could be collected. For each 2 man days (crew of 2 on each vessel) used for collecting data with the present DGPS method, an additional 1.5 man days (3 men setting up equipment for one half day) would be needed using the old method. In a typical year, 2180 man-days are required to perform hydrographic surveying in CEMVN. This means an additional 1635 man days at an average of \$361 a day (average effective cost of GS-9, GS-7, and GS-6 per day) would be needed to produce surveys of similar quality. This amounts to savings of approximately \$590,000 per year in CEMVN.

The improvements made by the Hydrographic Survey Improvement Team allow data to be collected more accurately, faster, and cheaper. No longer do target signs and mini-rangers have to be maintained on the bank. Labor associated with the maintenance of targets and electronics on the bank was eliminated with the implementation of DGPS. The speed with which data can be transferred to the office saves the navigation industry and the Corps of Engineers money by enabling operations managers to make more intelligent dredging decisions in a shorter amount of time. Increasing the accuracy of the surveys and decreasing the amount of time necessary to issue navigation bulletins has enhanced safety. The quality of the data display has actually increased the workload of the surveying team because customers are so impressed with the quality of the final product, more surveys are being requested. CEMVN was one of the first districts to utilize DGPS for hydrographic surveying on a regular basis. The first location in CEMVN where it was used was Southwest Pass of the Mississippi River. From there, its use has been expanded to all areas of the district.

In summary, the CEMVN Hydrographic Survey Improvement Team, spearheaded by Operations Technical Support Branch, purchased and installed DGPS surveying equipment and satellite phones on all of its survey vessels. The team also included personnel from Engineering Division, Systems and Programming who designed software to process this data and produce easily readable, high quality plots for review by managers and project users. This data is now available for general public viewing on the CEMVN WWW site using readily available plug-in software. The efforts of this team have enabled highly accurate hydrographic survey data to be delivered in an easily interpreted format in a shorter amount of time. Efforts of the team are realizing annual labor savings of \$590,000. Dredging decisions can now be made more quickly which saves both the Corps of Engineers and the navigation industry money because of more efficient use of dredges and the resulting reduced adverse effects of shoaling. Their work has also enhanced safety by allowing survey vessels to quickly respond to special requests involving unexpected trouble spots in the waterways. The U.S. Coast Guard and mariners have also benefited from the ability of the survey vessels to report the position of buoys routinely and accurately.

This CEMVN Hydrographic Survey Team effort has been nominated for a NPR Hammer Award.

POC: STEVE PATORNO, CEMVN-OD-T, 504-862-2333

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AUTOMATED SYSTEM OF MONITORING THE OLD RIVER CONTROL PROJECT

The Old River Control Project was authorized by the Flood Control Act of 1954 to prevent the Mississippi River from changing course. The Old River Control Project, possibly the most important civil works project in North America, maintains a distribution of flow between the lower Mississippi River and Atchafalaya River. That distribution was determined to be approximately 30 percent of the total latitude flow (combined flow in the Red River and Mississippi River above the control structures)

passing down the Atchafalaya River on an annual basis. The project was completed in 1961 and consisted of the Low Sill Control Structure, an Overbank Control Structure, a Navigation Lock and a Closure Dam. During the 1973 Flood on the Mississippi River, the Low Sill Control Structure was severely damaged. Consequently, the allowable differential head on this structure was reduced from 35 ft to 22 ft due to a scour hole that resulted in the undermining of the structure's foundation. Soon after this flood, the decision was made to build an Auxiliary Control Structure to increase the safety and flexibility of the project. This project was completed in 1986.

In 1990 a privately owned hydroelectric power plant was completed and now operates in conjunction with the Old River Control Project to maintain the 30/70 distribution. Certain events, usually lightning striking the electrical distribution system, will cause the plant to have a load rejection, resulting in the plant shutting down and the accompanying loss of flow diversion. If the loss of flow is not compensated for immediately, the differential head on the damaged Low Sill Control Structure will exceed the allowable differential head. The Corps uses the Auxiliary Control Structure to compensate for a loss of flow due to this unscheduled shutdown of the hydroelectric power plant. The Auxiliary Control Structure has six 62-ft wide and 75-ft high tainter gates that can be operated quickly.

Because the communication between the Old River Control Structures and the hydroelectric power plant is extremely critical, we have installed computers and video monitors to ensure that operators at either site can monitor the hydraulic conditions of all structures. The data is displayed in real time (fiber optic cable is used because of the bandwidth) and includes critical river and channel stages, flows, and gate openings. This is critical for the operators to make an informed decision. The video monitors are to ensure that the Auxiliary Control Structure channels are clear before opening the gates. Additional information displayed on the monitor includes annunciators showing the condition of the backup generators and entry detection alarms.

Additional capabilities that exist or are under development for the computer monitoring system, includes the ability to calculate gate operations to maintain a constant 30/70 distribution, determine relative sediment concentration, and enable remote operation of the structure. In addition, a comparative plot program has been developed to evaluate hydrographic surveys, and a web page is being considered so that recreational and commercial fisherman may access gage readings and flow distribution information as it effects fishing conditions in and around the Old River Control Structure Project.

POC: CARY McNAMARA, CEMVN-OD-JR, 215-492-2162

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Information

PROPOSED FY00 PROGRAM FOR THE CADD/GIS TECHNOLOGY CENTER FOR FACILITIES, INFRASTRUCTURE, AND ENVIRONMENT

A proposed FY00 Program for the CADD/GIS Technology Center for Facilities, Infrastructure, and Environment (the Center) was developed at the July combined meeting of the Executive Working Group (EWG) and the Field Technical Advisory Group (FTAG). Proposed funding was developed for projects to be accomplished during the upcoming fiscal year for continuing projects as well as new projects. The selection of new projects from among those submitted was based on three factors:

-
1. The contribution of the project to the accomplishment of the goals of the Balanced Scorecard developed for the Center,
 2. The potential return on investment (ROI), and
 3. The ratings given to the projects by members of the Field Working Groups (who met in May to review the projects).

A total of 34 projects were selected for funding. The proposed program will be submitted to the Board of Directors for approval at their 31 August meeting. After approval, the projects will be listed on the Center web site at: <http://tsc.wes.army.mil>.

POC: JEAN MCGINN, CEMP-EE, 202-761-1052

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ETL 1110-2-556, Risked-Based Analysis in Geotechnical Engineering for Support of Planning Studies

Engineering Technical Letter (ETL) 1110-2-556, Risked-Based Analysis in Geotechnical Engineering for Support of Planning Studies, was published on 28 May 1999. It replaces EC 1110-2-554, which expired in February 1998. This ETL has essentially the same content as the replaced EC, except that some comments and reference to ETL 1110-2-328, Reliability Assessment of Existing Levees for Benefit Determination, have been removed because ETL 1110-2-328 has been rescinded. Planning studies, which require characterizing the reliability of existing levees, shall be developed consistent with the approach in Appendix B of this ETL. Functions relating the probability of failure to the floodwater elevation, including the elevation of Probable Non-failure Point (PNP) and Probable Failure Point (PFP) as required in Policy Guidance Letter No. 26 are also covered in the ETL.

POC: JIM CHANG, CECW-EG, 202-761-0419

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HEAVE COMPENSATION

The New Orleans District is currently improving the quality and timeliness of survey operations by incorporating heave compensation onto all its hydrographic survey vessels.

Hydrographic survey operations are limited by the prevailing sea conditions in the survey area. The extent of this limitation is based on a number of factors, all of which determine a maximum sea state threshold for each survey vessel. During an in-house operational review process, it was determined that these vessel thresholds were often exceeded especially in our coastal areas, which make up a major percentage of our survey requirements. Scheduled surveys were being delayed. Survey vessels would travel to distant survey areas only to find conditions too rough. A weather prediction of marginal conditions would affect operations. The result was that the operations manager did not receive survey data in a timely and effective manner. This data is critical for accessing channel conditions and evaluating dredging requirements.

As a solution to this problem, the New Orleans District made the decision to raise the sea condition operational threshold by utilizing heave compensation technology. Heave compensation is the process in which the motion artifacts experienced by a hydrographic survey vessel in rough seas is electronically removed from the survey data in real-time. This is accomplished by interfacing a specially modified fathometer with a motion reference unit (MRU). The MRU, mounted near the vessel's center-of-mass, utilizes internal gyroscopes and accelerometers to measure, quantify and transmit vessel motions to the fathometer. The fathometer subtracts the vertical variations from the

bottom trace and then transmits, on demand, corrected digitized soundings to the vessel's hydrographic software. The resulting hydrographic product is as accurate and consistent as one produced in calm waters.

Prior to heave compensation, we were limited to conducting surveys in seas of one to two feet. We can now perform accurate surveys in seas of three to four feet. Heave compensation has greatly expanded the allowable timeframe to conduct critical surveys in our coastal channels. We now provide more accurate survey data in a shorter timeframe to our operations managers.

POC: STEVE PATORNO, CEMVN-OD-T, 504-862-2333

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Value Engineering

CITY CUSTOMER USING CORPS VALUE ENGINEERING (VE) AGAIN

The greatest indication that the Corps has satisfied a customer occurs when that customer asks the Corps back a second time to perform more work. When there are no Federal Construction Funds to be offered through the Corps on the first or second such project, this recognition is even more gratifying. Such is the case in Baton Rouge, Louisiana.

In late July, the Mayor of Baton Rouge personally visited, and offered encouragement to the second, Mississippi Valley Division/New Orleans District-led, Section 22, VE Study Team. Local newspapers have reported that sewer rates could double as a result of the Sanitary Sewer Overflow Corrective Action Project, highlighting the City's true need for Corps VE success. Savings and cost avoidance proffered in the first Corps study totaled over \$100 million, resulting in the District being asked to perform this second VE study on the same project. The City and Parish leaders have realized that Corps VE can help ensure that the project is as cost effective and taxpayer friendly as possible.

POC: MICHAEL HOLT, CEMP-EV, 202-761-8738

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Training

ROLLER-COMPACTED CONCRETE SHORT COURSE

The Portland Cement Association has organized a Roller-Compacted Concrete (RCC) Dam and Dam Rehabilitation Short Course to be conducted in Louisville, Kentucky, on Friday, 20 August 1999. The proposed schedule for the course includes a number of case studies of rehabilitation projects and a tour of the new Whipps Mill Dam.

The use of RCC to build new dams and to rehabilitate existing dams and spillways is steady increasing with over 95 projects completed in the last 10 years. The new Whipps Mill flood control dam demonstrates how RCC can be an economical solution for small gravity dams. Also with the number of unsafe dams in the country with inadequate spillways, RCC has become the most widely accepted method of providing overtopping protection to increase their hydraulic safety. In addition, RCC emergency spillways are increasing being used over new embankments dams especially for flood control projects.

The RCC short course and tour is co-sponsored by the Association of State Dam Safety Officials (ASDSO), the Louisville and Jefferson County Metropolitan Sewer District, List and Clark Construction Company, and Ogden Environmental.

The cost of the course is \$110.00. Individuals interested in attending the short course should contact Randy Bass, Portland Cement Association, at (770) 921-5894 or fax your name, address, and telephone number to Randy at (770) 717-9377.

POC: CHARLES PEARRE, CECW-EP, 202-761-4531

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AVAILABLE PROSPECT COURSES

Registration is still being accepted for the FY2000 engineering and construction PROSPECT courses listed below. If interested, please have a completed DD Form 1556 submitted to the Registrar's Office in Huntsville (ATTN: CEHR-P-RG) at your earliest convenience. Telephone: 256-895-7421/7425. Fax: 256-895-7469. Further information on these courses can be found in the FY2000 Purple Book (CEHRP 350-1-1). You can also find the Purple Book online on the Professional Development Support Center's (PDSC) home page at <http://www.hnd.usace.army.mil/to/tdindex.htm>.

Ctl No	Course Title	City	State	Start Date	End Date	Tuition
009	CORROSION CONTROL	CHAMPAIGN	IL	31-Jan-00	4-Feb-00	\$1,440
011	COASTAL PLANNING	VICKSBURG	MS	25-Oct-99	29-Oct-99	\$2,090
013	COASTAL ENGINEER	VICKSBURG	MS	01-Feb-00	10-Feb-00	\$2,490
019	COMPUTER APPL/ENGR	VICKSBURG	MS	24-Jan-00	28-Jan-00	\$2,020
021	CONCRETE 1--QV	VICKSBURG	MS	31-Jan-00	04-Feb-00	\$930
022	CONCRETE TECHNOLOGY	VICKSBURG	MS	27-Mar-00	31-Mar-00	\$1,540
067	ADVANCED HEC-RAS	DAVIS	CA	24-Jan-00	28-Jan-00	\$1,940
083	PAINT COATINGS (SUB)	CHAMPAIGN	IL	24-Jan-00	28-Jan-00	\$1,180
085	PAVE DESIGN & CONST	VICKSBURG	MS	29-Feb-00	09-Mar-00	\$1,410
098	RESERVOIR ANALYSIS	DAVIS	CA	19-Jun-00	23-Jun-00	\$1,840
113	SOIL STRUC INTERACT	VICKSBURG	MS	20-Mar-00	24-Mar-00	\$2,050
115	PAVEMENT EVAL/REPAIR	VICKSBURG	MS	28-Mar-00	6-Apr-00	\$1,340
125	PAVEMENT MAINT TECH	VICKSBURG	MS	15-Nov-99	19-Nov-99	\$1,100
161	RIVER & WETLANDS	DAVIS	CA	11-Sep-00	15-Sep-00	\$1,870
247	SEISMIC STABILITY	VICKSBURG	MS	12-Jun-00	16-Jun-00	\$1,410
257	CONCRETE MAINT & REP	VICKSBURG	MS	15-May-00	19-May-00	\$1,230
275	ENG/DES CONST WETLND	ORLANDO	FL	6-Mar-00	10-Mar-00	\$2,250
285	STREAMBANK EROS/PROT	VICKSBURG	MS	27-Mar-00	31-Mar-00	\$1,960
394	ADV STREAMBANK PROT	VICKSBURG	MS	10-Apr-00	14-Apr-00	\$1,990
396	FLOOD CONT CHAN DES	VICKSBURG	MS	15-Nov-99	19-Nov-99	\$1,690

POC: JOHN BUCKLEY, CEHR-P-TO, 256-895-7431

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Meetings and Conferences

ASCE CONVENTION

This year's American Society of Civil Engineers convention is scheduled for 17-20 October 1999, in Charlotte. Attending these types of events is an excellent way to keep up with the latest developments in your profession and bringing fresh ideas into our organization. Attendance to the ASCE convention is highly encouraged. You will find additional information at <http://www.asce.org/conference/99conv/index.html>.

POC: RAY NAVIDI, CEMP-ET, 202-761-0223

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Partnering

Partnering With the American Consulting Engineers Council

HQUSACE staff held a partnering meeting with ACEC on 5 August 1999. ACEC is a trade association of over 5500 engineering firms. USACE has had a formal partnering agreement with ACEC since October 1992. We meet several times a year to discuss items of common interest. The agenda included the following topics:

- USACE Program Outlook for FY 2000
- USACE Technical Assistance Program
- Value Based Delivery Systems
- Public/Private Training Opportunities
- USACE Alliance with the Construction Industry
- ACEC Market Conference
- USACE A-E Contracting Program

The minutes of this meeting will be distributed by e-mail to all MSC Directors of Technical Services and District Chiefs of Engineering in mid-August. This information will be useful in your local and regional partnerships with ACEC state-level organizations.

POC: DON EVICK, CEMP-EC, 202-761-1053

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AMERICAN CONSULTING ENGINEERS COUNCIL (ACEC) - LRD REGIONAL PARTNERING

A majority of the planning, engineering, design and surveying and mapping services for LRD Districts is acquired by contract with the private architect-engineer (A-E) firms. LRD districts contract out 40 - 50 percent of planning and design for the civil works program and 70-80 percent of our military design program to the private sector annually. This amounts to between \$45-50 million in annual contract fees. Many of our districts have formed partnering agreements with the A-E community and host periodic partnering meetings. We have found partnering with the A-E community to be a valuable tool in executing our projects.

The Great Lakes and Ohio River Division has established a regional liaison committee with the American Consulting Engineers Council (ACEC). The regional liaison committee offers the following benefits:

1. Provides an opportunity to periodically sit and discuss our business on a partnership basis versus an adversary basis,
2. Provides a forum for AE and COE to discuss issues normally that are difficult in a typical client/consultant situation, and
3. Discuss and develop regional standardization initiatives for AE contracts and interfaces and provide input to the HQUSACE-ACEC federal liaison subcommittee.

District representatives and key engineering and contracting staff from the division office meet with ACEC members about 3 times per year. ACEC members representing each state within the Great Lakes and Ohio River geographic area participate. A report of each meeting is prepared and distributed to all attendees, with information copies provided to Mr. Evick, CEMP.

POC: LYN RICHARDSON, CELRD-ET-E, 513-684-3035

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Editors' Notes

SUBSCRIBE TO ECNEWS

With this issue of the Engineering and Construction News we have established a subscription list on the Corps List Server. The name of the list is LS-ECNEWS. The purpose of the list is to distribute the Civil Works and Military Programs Engineering and Construction community newsletter, *Engineering and Construction News*.

All the names in address list for the June issue of the news were used to create the subscription list. You can subscribe or unsubscribe to LS-ECNEWS by sending an e-mail message to majordomo@usace.army.mil with no subject line and only a single line of text in the message body. That single line of text should have the following format: **subscribe ls-ecnews** or **unsubscribe ls-ecnews**. The List Server system will automatically pick up your originating e-mail address from the message and add it to or delete it from the distribution list.

If you have any questions about the list server, see the List Server E-Mail Delivery System web page at <http://eml01.usace.army.mil/other/listserv.html>. Or you may contact either Denise Massihi or Charles Pearre if you have additional questions on the subscription list.

POC: CHARLES PEARRE, CECW-EP, 202-761-4531

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INTERNET ADDRESS FOR ECNEWS

The Los Angeles District asked for the current issue of the Engineering and Construction News to be placed at the same address each month. This was requested in order to allow the district to set up their Engineering Division Intranet so that it always points to the latest version. This will allow their staff to access the News without having to be on the distribution list.

We check with our Webmaster and one copy of the current version of the News will be post at <http://www.usace.army.mil/inet/functions/cw/cecwe/notes/current.pdf> each month. This will generally occur one to two days after the News is initially distributed.

POC: CHARLES PEARRE, CECW-EP, 202-761-4531

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